Philips JET*Stream* to Codonics EP-1000 Quick Start Guide

Overview

The purpose of this instruction is to outline the essential steps required to set up and configure a Codonics EP-1000 printer for operation with a Philips JET*Stream* workstation. More detail on all of these instructions can be found in other supplied documents such as the EP-1000 and JET*Stream* manuals.

The EP-1000 driver installation is different from most other Windows printers. Be sure to follow the instructions exactly. More detail can be found in the driver loading Tech Brief pdf provided on the driver CD or at www.codonics.com.

Printer Setup

1. Remove the EP-1000 printer from its shipping box and packing. Set it in place where it will operate.
2. Remove and save the two green shipping brackets that are attached at the front of the printer, in the media cassette slot. No tool is required to remove these brackets.
3. Remove the media cassette from the shipping box and remove all packing material from the cassette.
4. Load the media cassette as follows:
   A. Press down on the spring plate of the cassette until it locks.
   B. Set the green side spacers according to the paper size you are loading: down for Letter (A-size); up for A4-size. Also set the green end stop accordingly.
   C. Unwrap a 50-sheet paper pack. One is included in the starter kit. Place the paper into the cassette so that the shiny side is up.
5. Insert the loaded media cassette into the front of the EP-1000.
6. Load ribbon carrier as follows:
   A. Remove and unwrap the green ribbon carrier from the EP-1000 shipping box.
   B. Unwrap the 50-print starter ribbon that is provided in the starter kit.
   C. Snap the ribbon into the carrier. The spools are keyed so that the ribbon only goes in one way.
7. Open the printer door and insert the loaded ribbon carrier, engaging the spring-loaded gears to the left.
8. Attach the two EP-1000 covers as follows:
   A. Snap the smoky-gray cover into the slot at the rear of the printer.
   B. Set the white, U-shaped cover at the front of the printer over the media cassette.

Printer Power and Test Print

1. Connect the printer power cord at the back of the EP-1000.

> **CAUTION:** Printer must be powered with 120 vac ONLY. Connecting to any other voltage may result in damage to the printer.

2. Make an internal test print as follows:
3. With printer power off, press and hold the ONLINE button.
   A. Turn on printer power via power switch at left front.
   B. Continue to hold the ONLINE button for a few seconds. When the POWER light stops flashing, release the ONLINE button, then momentarily press the PRINT button. The print cycle should begin, but it may take a couple of minutes until the thermal print head warms up.
   C. After the test print has printed successfully, turn the printer off.

   Note: If the test print is unsuccessful, check the *Troubleshooting* section of the EP-1000 manual.

Network Connection

1. Locate the Ethernet converter and its power supply in the top foam of the EP-1000 shipping box.
2. Plug the Ethernet converter into the parallel port connector at the back of the EP-1000. Secure it with the two clips.

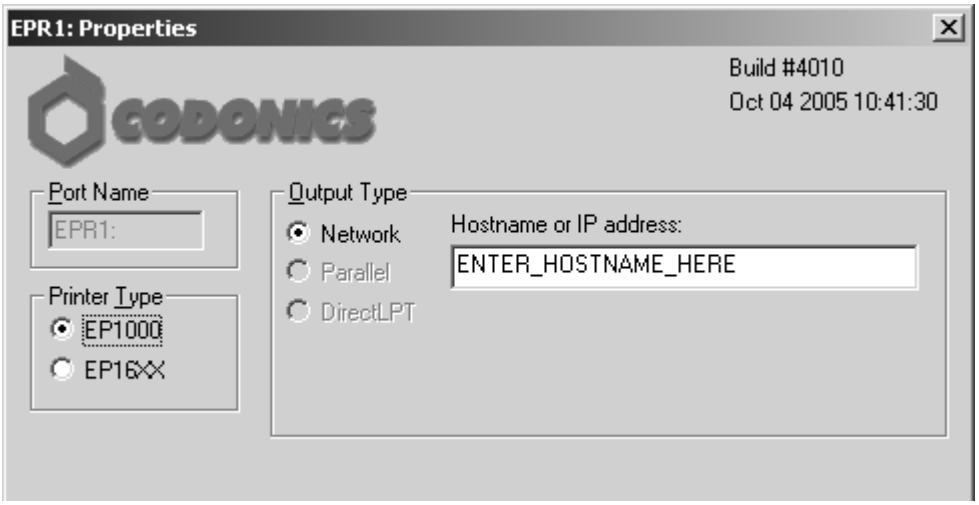
3. Insert the power connector into the back of the Ethernet converter. Plug the Ethernet converter power module into a 120 vac power source. Ensure that the **Pwr** indicator at the back of the converter is lit.
4. Connect a network cable to the back of the Ethernet converter as follows:
   - ❖ Use the straight-through cable (blue cable provided with EP-1000) if the EP-1000 and the JET*Stream* are part of a network.
   - ❖ Use the crossover cable (gray cable provided with the EP-1000) if the EP-1000 is to connect directly to the JET*Stream*.
5. Verify that the orange **Link** indicator is lit.

Driver and Network Configuration

Administrative privileges on Windows XP are required to install print drivers. By default, JET*Stream* users should have XP administrative privileges. If you do not have administrative privileges, please contact your system administrator.

1. Determine the IP address to be used by the EP-1000:
   - ❖ If on a large network, obtain network address information from the System Administrator.
   - ❖ If directly connected or on an isolated network, choose an unused address that differs only in the last section (octet). For example, if the JET*Stream* is at 192.9.200.10, the EP-1000 could use 192.9.200.50 if no other device was already using it.

   NOTE: The JET*Stream* IP address can be determined by opening a command window (Start → Run → **`cmd`**) and then typing **`ipconfig <Enter>`**.
2. Locate the EP-1000 driver CD which can be found in the EP-1000 shipping box. Place it in the CD drive of the JET*Stream*.
3. Use **My Computer** or **Windows Explorer** to browse to the CD. Doubleclick on the file **ep-1000_windriver.exe** to start the automated driver loading process. Follow the prompts.
4. A special **EPR1** printer port will be automatically created which must be used for the EP-1000. When the EPR1 configuration screen is displayed, type the IP address determined in step 1 in the box labeled **Host name or IP address**.



5. The Add Printer Wizard will launch automatically. Please note the following very important points:
   A. The EP-1000 must be installed as a *Local* printer. Do not choose "Network Printer Installation."
   B. The special EPR1 local port *must* be used for the EP-1000. Do not choose or create a TCP port.
   C. When prompted for drivers, click **Have Disk**, but DO NOT browse to the driver CD. The driver files will be found on the JET*Stream* at the following path:

      `c:\CODONICS\drivers\win2k_xp`

D. The EP-1000 should be set as the Default Windows Printer. This will simplify JET*Stream* configuration and use.
E. DO NOT select the Test Print option. A test print will be made after the Ethernet converter is programmed.
F. Set the EP-1000 for Do not Share.

Ethernet Converter Setup

Before the JET*Stream* can print to the EP-1000, the Ethernet converter must be set to the proper network address. A special software configuration tool is loaded on the JET*Stream* when the drivers are loaded. The instructions below describe how it is used.

1. Open a Windows XP command window:
   A. Click on the Windows **Start** button.
   B. Click **Run…** then in the text box, type cmd. Then click **OK**.
   C. Change the default directory to **`c:\codonics\bin`**.
2. Launch the configuration tool by typing:

   `set-ep1000 <Enter>`

3. Follow the prompts and note the following:
   A. The Ethernet address of the converter can be found on the label of the converter. It is a 12-digit hexadecimal that starts with 00-40-17.
   B. Use the same IP address that was used for configuration of the EPR1 port during driver install.
   C. For direct connect or isolated networks, use the following:

      Subnet Mask: **`255.255.255.0`**
      Gateway: **`0.0.0.0`**

      For larger networks, obtain the proper values from the Network Administrator.
4. When completed there should be a message indicating that the Parameters were set OK. In some cases, the parameters may set up properly, but a "failure to verify" message may be displayed. If this failure message does occur, do the following:
   A. Type **`ping`** ***`IP address`*** **`<Enter>`**. If a response indicating a successful ping is returned, then the Ethernet converter has been programmed successfully. If the ping fails, recheck connections and network settings and run set-ep1000 again.
   B. Close the Windows XP command window by typing **`exit <Enter>`**.

Windows Printing Preferences

5. Click the Windows **Start** button. Then click **Settings…** then **Printers and Faxes**.
6. Right click on the icon for the Codonics EP-1000.
7. It is recommended that the EP-1000 be set as the Windows default printer. If not already set, it can be made the default printer at this time. Choose **Set as Default Printer**.
8. Select **Printing Preferences…** then click on the **Layout** tab. Select **Landscape**. This will provide maximum printable area for most JET*Stream* images.
9. Click the **Advanced…** button. Change the **Paper Size** setting, which always defaults to Letter, to **`A`** or **`A4`**, as appropriate.
10. Click on **MCM**. You can choose from available MCM (Medical Color Matching) settings. MCM **`104`** and MCM **`105`** were developed specially for Philips Medical Systems. MCM 105 replicates the colors of the NP-1600 series printer for customers who prefer that appearance.

EP-1000 Interface Selection

Printing to the EP-1000 is done over the network, but the Ethernet converter plugs into the EP-1000 parallel interface port. Therefore, the parallel interface must be selected at the EP-1000. That is accomplished as follows:

1. Turn on power to the EP-1000. After it boots up there should be no red indicators on the top panel. If there are, resolve the problem first. For example, be sure the door is closed and that a loaded media cassette is installed.
2. The two interface indicators are to the right of the EP-1000. If the uppermost light is lit, then the parallel interface is selected and no further action is required. Go to the next section.
3. If the lower light is lit then the wrong interface is selected. Do the following to select the parallel interface:
   A. Momentarily press the ONLINE button. This will cause the selected interface light to flash, indicating that the printer is offline.
   B. Momentarily press the INTERFACE button. This will toggle the interface selection.
   C. When the Parallel interface has been selected (top interface light is flashing) press the ONLINE button to return the EP-1000 to the ready mode. The top interface light should now be lit continuously.

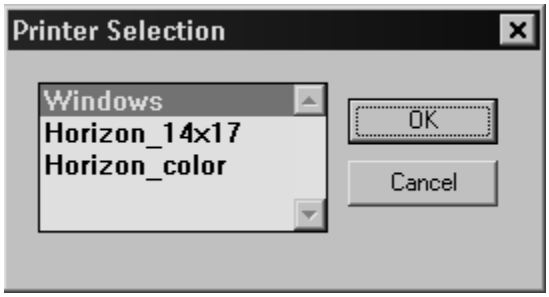
Windows Test Print

At this point, it is a good idea to send a test print from the Windows XP system to ensure proper connectivity and printer operation.

1. Click the Windows **Start** button. Then click **Settings…** then **Printers and Faxes**.
2. Right click on the icon for the Codonics EP-1000.
3. Click **Properties** and then select the General tab. Click **Print Test Page**, which will immediately initiate the sending of a test page to the EP-1000. Within about 10 seconds you should see the interface lights on the EP-1000 begin to flash indicating transmission in progress.
4. Click **OK** when asked if the test page printed. Click OK even if there was a problem and the test page did not print.
5. If the Windows test print was not successful, determine and fix the problem before proceeding to the next step.

Printing from JET*Stream*

1. After the EP-1000 has been correctly set up on Windows XP, the JET*Stream* application must be restarted in order for it to see a newly installed printer.
2. If the EP-1000 has been set as the default Windows printer, no additional configuration needs to be done at the JET*Stream*. This is the recommended installation. If the EP-1000 is *not* the default Windows printer, consult the JET*Stream* manual for how to configure multiple Windows printers.
3. Open a patient file and image at the JET*Stream*. Click on the **Print** icon at the top of the screen. The printer selection prompt, shown right, should appear.
4. Click on **Windows**. Then click **OK**.

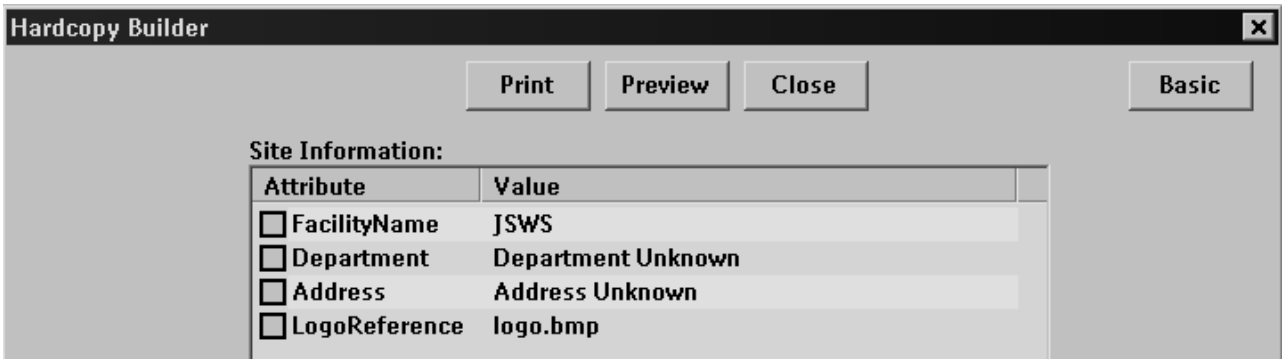


> *The next two steps are essential.* They must be done the first time the JET*Stream* prints to EP-1000 in order to create proper printing templates.

5. Click on **Preview**. The view shown is the printed view from the JET*Stream*'s point of view.

6. Click on **Preview** again. This may seem redundant, but the second preview is from the printer's point of view and a side effect is that the proper template for printing is created and saved. This step is only required for the first print from the JET*Stream*.

7. Now, click **Print**. Within 30 seconds the image should be processed and begin to transmit to the EP-1000.
8. The HardCopy Builder includes a feature which prints the facility information on each print. Some or all of the facility information can be removed from the print by going into Advanced and unchecking the boxes under **Site Information**. This step must be performed each time a print is sent.



Adjusting Image Quality

The Codonics EP-1000 provides a number of adjustments that can be used to optimize printed image quality. All of the parameters discussed below can be set each time at print time, or can be set as a Printing Preference under Windows XP. Printing Preferences sets the printing defaults for the current login name.

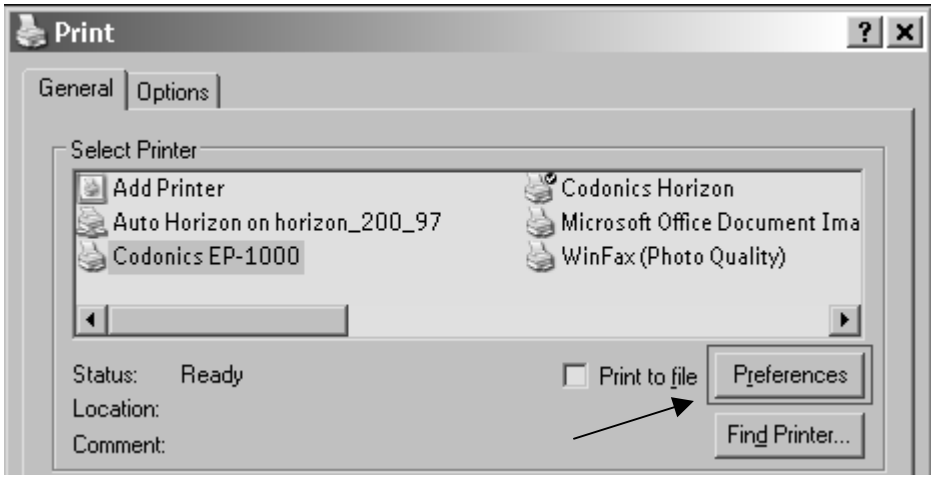
For color printing, the most important setting is Codonics' exclusive Medical Color Matching (MCM) setting. Any of the five MCM settings can be used to provide a starting point for matching printed colors to the colors as displayed on the monitor. Note that MCM 104 and 105 were specially designed for Philips. MCM 105 replicates the colors of the NP-1600 series printer for customers who prefer that appearance.

Once the MCM is selected, the EP-1000 provides three other adjustments that can be used to fine tune the color match or optimize printed image quality:

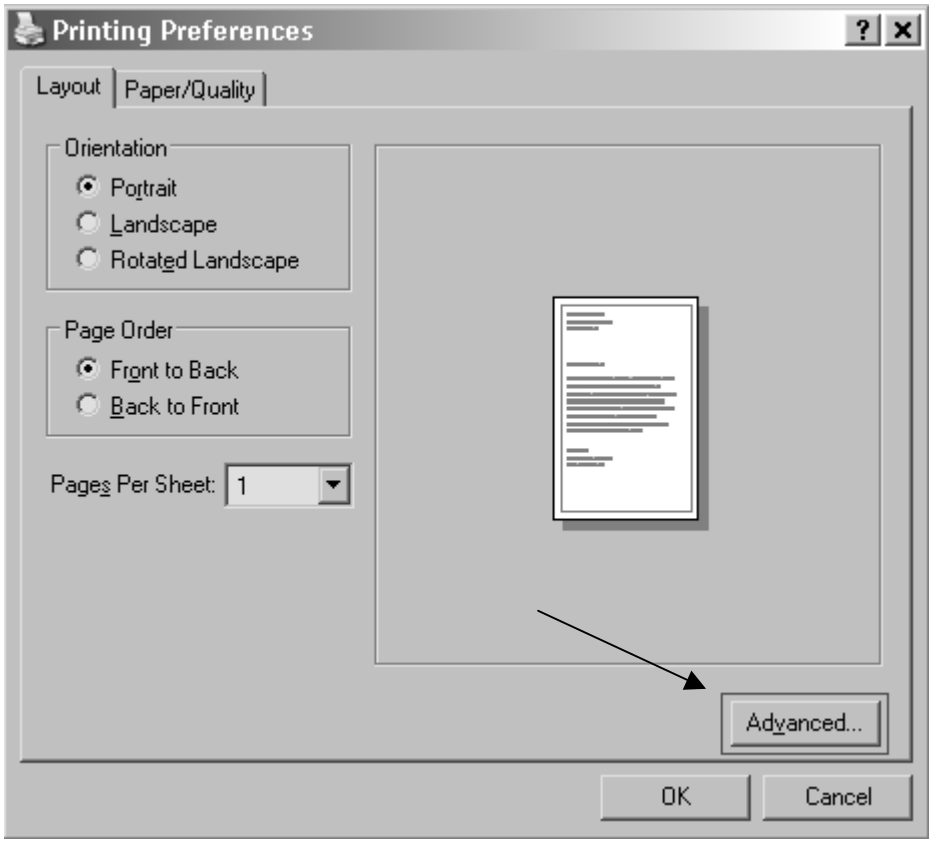
- **Gamma**: Affects the overall lightness or darkness of the printed image while preserving full black and full white. An increase in gamma value will lighten the printed image; a decrease in gamma value will darken the printed image. Gamma typically ranges between 1.00 and 2.00.
- **Contrast**: Enhances or reduces the contrast of the printed image. Positive settings will enhance contrast while negative settings will reduce contrast in the printed image. Contrast typically ranges between 0 and +30.
- **Saturation**: Affects the amount of color in the printed image. Positive settings will add color and vibrancy to the printed image while negative settings will reduce the amount of color in the image. A setting of -100 will cause color images to print in grayscale.

To change settings at print time, click on Print, then Preferences, then set the Paper Size and the Printer Features.

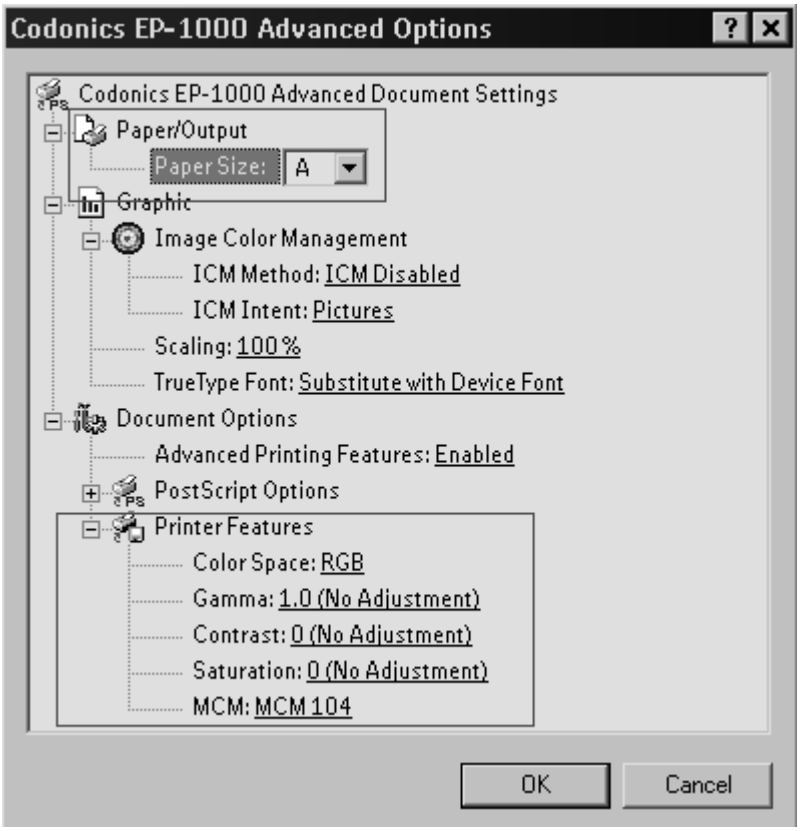
Print to **Preferences…**



Preferences to **Advanced…**

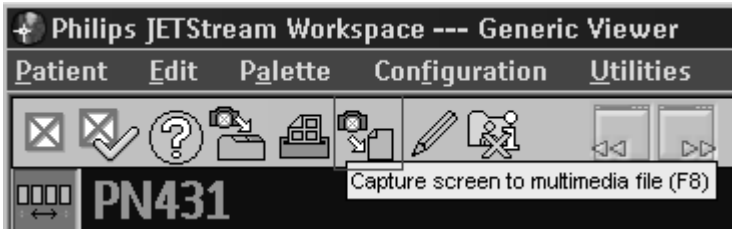


Advanced Features…



Exporting Images

The JET*Stream* toolbar allows users to export images in .bmp, jpeg and .mov formats. This can be useful for troubleshooting color-matching issues. To save the image, click on the **Screen Capture** icon:



Anonymizing Images

JET*Stream* has a feature for when an image needs to be printed without its identifying data called De-Identify. Click the **De-Identify** icon to strip an image of the patient name. Use this when sending images to Codonics Technical Support: